

OXALIS POLYPHYLLA JACQ. AND ITS VARIETIES.

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Four illustrations of this very common plant were published by Jacquin :—

O. polyphylla, Jacq. in *Oxalis Monographia* tab. 39.

O. amoena, Jacq. in *Hort. Schoenbr.* II, tab. 206.

O. filifolia, Jacq. in *Hort. Schoenbr.* III, tab. 273.

O. versicolor (corrected to *O. polyphylla* in the letterpress) in *Icones Rar.* III, tab. 473.

Although specimens can be found to match these figures, in view of the high degree of variation in the species, there appear to be no grounds for upholding either *O. amoena* or *O. filifolia* even as varieties. Previous authors have cited Burman's figure in *Pl. Afr. Rar.* tab. 27, f. 1 as *O. polyphylla*. The drawing, particularly of the leaves, is so execrably bad that it is quite unrecognisable.

Unlike most species of *Oxalis* it shows a great deal of variation in the bulb. In some forms the tunics are thin and chestnut-brown in colour, in others rigid and darker, while sometimes they exude a copious gummy excretion which hardens and forms a somewhat shapeless outer coating to the bulb or series of bulbs, which, in the case of old plants, may be welded together with it.

The gummy bulb excretion only seems to be present in plants growing in sandy soil and does not occur in those found in gravel or heavier soils, yet colonies growing in almost pure sand may show no trace of it. Nor does it appear to be related to the age of the bulb which in this species is very long-lived. A fairly large non-gummy bulb showed on dissection about 30 alternating layers of protective tunics and old nutritive scales, proving its age to be at least 30 years, there being no means of ascertaining whether any of the outer (earlier) layers had rotted away in the course of time.

Except in the case of the varieties described here it has not been found possible to correlate the bulb variations with any other distinct character. The corolla varies from white or pink to purplish red and the sepals vary in width and shape, but the differences in the width of the leaflets are probably entirely due to habitat and conditions of growth. The ovary chambers are 2—3-ovuled.

The typical form occurs as far north as the Wellington and Malmesbury Divisions and is recorded from all along the southern Coastal Belt as far east as Port Elizabeth.

The dividing line between *O. polyphylla* and *O. falcata* Salter (*O. falcata* Sond.) is somewhat thin. The typical forms of both species occur on Lion's Head and are readily separable, but certain intermediates with more pubescence, narrower attenuate sepals and inconspicuous or obsolete calli on the leaflets and sepals (e.g. Salter 8388, Groot Drakenstein, 3343 and 6605, near Durbanville and 4494, near Paarl) seem to merge progressively from the former species towards the latter.

Zey. 218, in Berlin Herbarium has been cited as *O. polyphylla*, but the specimens bearing this number in Sonder's Herbarium belong to *O. gracilipes* Schlechter.

Although it only seems possible to treat *O. polyphylla* as a composite species consisting of a large number of micro-varieties, at the same time certain forms show definite characters by which they can always be distinguished and the following five varieties, three of which are here described for the first time, can be differentiated.

OXALIS POLYPHYLLA VARIETIES.

Var. β **pentaphylla** (Sims) Salter. (*O. pentaphylla* Sims.) The majority of the leaves 5-foliate, a few sometimes 3—4-foliate. Petals pale rose.

A common plant in the Cape Peninsula and also recorded from Caledon and Bredasdorp Divisions.

Var. γ **heptaphylla**, Salter, n. var. Foliola 7, angustissima, forma typica aliter similis.

Hab. Cape Province: Caledon Div., Hermanus, on lower slopes of the Klein River Mts., Galpin 12670 (*type* in Bolus Herbarium), Fl. Apl.—May.

Similar to the typical form in all respects except for the leaves the majority of which are 7-foliate, with a few 5—6-foliate.

Var. δ **pubescens**, Sond. emend. Salter. (*O. polyphylla*, Jacq., var., *eglandulosa* E. & Z., undescribed—cited by Sonder and R. Knuth as var. *glandulosa*). Rather densely pubescent on all parts. Bulb hard, black, irregular in shape and intensely gummy. Leaflets 3, the apical calli sometimes very inconspicuous or missing. Peduncles cauline or apical. Sepals linear-lanceolate attenuate, with or without apical calli. Corolla tube very narrowly funnel-shaped: petals oblanceolate, much narrower than in the typical form, the lamina rose-purple, pale lilac or white, somewhat acute at the apex. Ovary chambers 1-ovuled.

Hab. Cape Province : Clanwilliam Div., Brakfontein, E. & Z. 6963
(*type*) colourless, Salter 2067 (cult), white ; in sandy ground at the

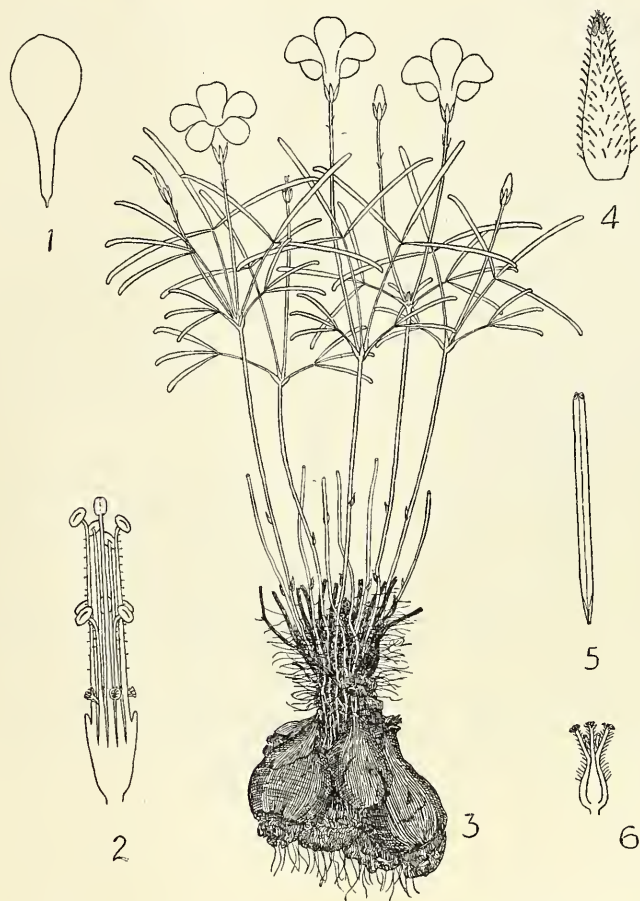


FIG. 1. *Oxalis polyphylla* Jacq., var. *minor* Salter. 1. Petal $\times 2$. 2. Androecium $\times 8$. 3. Plant, natural size. 4. Sepal $\times 8$. 5. Leaflet $\times 2$. 6. Gynaecium $\times 8$. (Salter 8117). Del. T. M. Salter.

summit of Grey's Pass, Salter 750, 4430, 8123, rosy-purple ; Warm Baths, F. Bolus (Bol. Herb. 14600, 14607, 14626) pale lilac.

Some of Mr. Bolus' specimens are elongate with leaflets up to 2

mm. broad and nearly all the peduncles are cauline. These are evidently shade forms. Specimens from open situations produce both cauline and apical peduncles.

Var. ϵ **alba**, Salter, n. var. *Planta* albo-pubescent. *Bulbus* minor, late ovoideus vel subglobosus, apice acutus, tunicis papyraceis pallidioribus, non gumminosis. *Caulis* brevis vel vix exsertus. *Foliola* 3. *Sepala* lanceolata, vix attenuata, apice inconspicue bicallosa. *Corolla* alba, tubo infundibuliforme luteo: petala striis minutis punctisque purpureis ad marginem ornata. *Ovarii* loculae 1-ovulatae.

Hab. Cape Province: Cape Div., Brackenfel, Salter 4398 (*type* in Bolus Herbarium), near Stikland 5271; Stellenbosch Div., near Faure 5251; Paarl Div., 12 miles east of Klipheuvcl, 6016; Malmesbury Div., Kalabas Kraal, *F. Bolus* (Bol. Herb. 14562), Paardeberg, *Leipoldt* (S.A. Mus. 48369, 48370), near Mamre, Salter 2071. Fl. Apl.—May.

A sand-loving variety, pubescent as in the foregoing but distinguished by the smaller roundish bulb with pale dry shining tunics, the short stem and the white petals which are powdered towards the outer margin with minute purple streaks and dots. The petals are shaped as in the typical *O. polyphylla*.

Var. ξ **minor**, Salter, n. var. *Planta* caespitosa in partibus omnibus minor. *Bulbi* congesti, gumminosi. *Foliola* 3, anguste linearia, apice bicallosa. *Sepala* lanceolata, fere 3 mm. longa, glanduloso-pilosa, apice callis 2 conspicuis rubris ornata. *Corolla* glanduloso-pilosa, 1.0—1.3 cm. longa, rosea, tubo luteo. *Ovarii* loculae 1-ovulatae.

Hab. Cape Province: Worcester Div., Bain's Kloof, at the outspan known as "The Haunted House," *Leipoldt* (Salter 8117, *type* in Bolus Herbarium), Bain's Kloof, near summit, *F. Bolus* (Bol. Herb. 14517). Fl. Apl.—May.

Differs from all other forms in its small flowers with glandular sepals and corolla. The flowers have not increased in size in cultivation and it seems to be a distinct mountain variety. (Fig. 1.)